Research at the Zucker lab
Research at the Zucker lab

Our three main research programs

Environmental Nanotechnology

Nanomaterials for water treatment
Development of advanced water-treatment technologies which leverage the reactive and tunable properties of nanomaterials for selectivity toward priority pollutants, cost-efficiency and sustainability

Nanotoxicity
Using model phospholipid bilayer membranes, we fundamentally study interactions of living cells and emerging nanomaterials of different chemical composition, orientation, and morphology

Advanced Oxidation
Practical oxidation technologies for organic contaminant removal from wastewater and groundwater
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What is Environmental Nanotechnology?

1. Environment
2. Nanotechnology
3. Environmental Nanotechnology

Applications
Implications
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- Addressing Water Challenges Through Nanotechnology
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- Environmental Costs of Using Nanotechnology

**MANUFACTURING**

- Energy intensive
- Hazardous reagents
- Waste streams

**RELEASE/LEACHING**

**TOTAL ENVIRONMENTAL IMPACT**

**UNCERTAINTY**